

The Trudeau Administration on Water: Restoring (and Improving?) Protections for Fish and Fish Habitat

Great Lakes Water Conference, Toledo, Ohio

November 3, 2017

Martin Olszynski
Assistant Professor
University of Calgary Faculty of Law

Outline

1. *Fisheries Act* section 35 prior to 2012
2. Bills C-38 and C-45 (2012 Budget Bills)
 - A. The Purported Rationale
 - B. Comparing the Habitat and Fisheries Protection Regimes
 - A. Methodology and Results
 - B. National, Regional and Sectoral Trends
 - C. Habitat v. Fisheries Protection:
 - A. HADD v. DPAD
 - B. The Fisheries Requirement
 - C. Size of Impact
 - D. Section 6 Factors
3. Potential Reforms

Section 35 *Fisheries Act* (1977 – 2012)

- Harmful alteration, etc., of fish habitat

35. (1) No person shall carry on any work or undertaking that results in the harmful alteration, disruption or destruction of fish habitat.

- Alteration, etc., authorized

(2) No person contravenes subsection (1) by causing the alteration, disruption or destruction of fish habitat by any means or under any conditions authorized by the Minister or under regulations made by the Governor in Council under this Act.

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Previous jurisprudence (NB: none for current version)

"It has been held that the word "harmful" in s 35(1) only modifies "alteration" and not "disruption" or "destruction"... It has also been held that the Crown need only prove that **one element of fish habitat as defined in s 34(1) has been harmfully altered, disrupted or destroyed** in order to establish the offence... Also, the Crown need not prove actual harm to fish in order to establish an offence under s 35(1)" [citations omitted].

R. v. BHP Diamonds Inc., 2002 NWTSC 74 (CanLII) at paras 71
– 72

Key Points:

- Evidence must establish actual impact;
- No regulations currently exist to authorize impacts to fish habitat
 - Authorizations are always granted on *ad hoc* basis

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Bills C-38 and C-45

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The Rationale



Ottawa defends proposed Fisheries Act changes

MARK HUME
VANCOUVER — The Globe and Mail

0 comments

INVESTMENT
ACTIONS

"Mr. Speaker, current fisheries policies go well beyond what is required to protect fish and fish habitat. I can give some examples of that," he said. "Last year in Saskatchewan, a long-running country jamboree was nearly cancelled after newly flooded fields were deemed fish habitat by fisheries officials. In Richelieu, the application of rules blocked a farmer from draining his flooded field."

The incident in Saskatchewan took place last June, when DFO officials used the Fisheries Act to stop the Craven Country Jamboree from pumping water off flooded flats along Last Mountain Creek and the Qu'Appelle River.

A similar situation occurred in southwest Quebec, where farmers were warned they could be fined if they killed fish while pumping out fields flooded when the Richelieu River spilled its banks.

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New Subs 35(1) at a Glance

"the death of fish," including "the (a) parts of fish, (b) shellfish, crustaceans, marine animals and any parts of shellfish, crustaceans or marine animals, and (c) the eggs, sperm, spawn, larvae, spat and juvenile stages of fish, shellfish, crustaceans and marine animals"

"or any permanent alteration to, or destruction of, fish habitat," meaning "spawning grounds and any other areas, including nursery, rearing, food supply and migration areas, on which fish depend directly or indirectly in order in order to carry out their life processes"

- 35. (1) No person shall carry out any work, undertaking or activity that results in serious harm to fish that are part of a commercial, recreational or Aboriginal fishery, or to fish that support such a fishery.

"Commercial means fish is harvested under the authority of a licence for the purpose of sale, trade or barter"
 "Recreational means fish is harvested under the authority of a licence for personal use of the fish or for sport"

"Aboriginal fishery means fish is harvested by an Aboriginal organization or any of its members for the purpose of using the fish as food, for social or ceremonial purposes or for purposes set out in a land claims agreement entered into with the Aboriginal organization"

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Habitat Protection v. Fisheries Protection

Habitat Protection Regime	Fisheries Protection Regime
Applied to works and undertakings	Applies to works, undertakings and activities
Prohibited the harmful alteration, disruption or destruction of fish habitat (HADD)	Prohibits the death of fish and the permanent alteration or destruction of fish habitat (DPAD)
Applied to all fish habitat as defined in the Act	Applies to fish – and their habitat – that are part of, or support, commercial, recreational or Aboriginal fisheries
Minister had broad discretion to issue authorizations	Minister must consider certain factors (section 6) and provide for the sustainability and ongoing productivity of fisheries

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Works, Undertakings and Activities?

ATV ENFORCEMENT May 7, 2015 3:51 pm

Mountie says more enforcement needed of ATVs in Alberta backcountry

By Staff The Canadian Press

Comments 7 Facebook 1.6k Twitter 53 Email Print



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HADD v. DPAD?

Bill C-38 The Fisheries Act says you can't do this to fish habitat...

What is ~~HADD~~ Serious Harm

~~Harmful alteration:~~

- Change it so that it can't support as many fish as it used to.

~~Disruption:~~

- You can't change it for the worse for even just a little while.

~~Destruction:~~ or alter

- Permanently remove it...somehow

...unless the Minister specifically authorizes you to do so...and then you have to replace it, with something just like it or better and usually nearby.

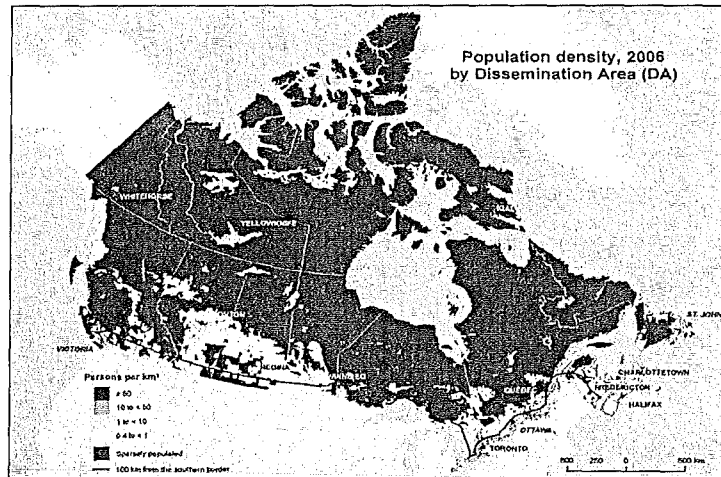


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A0322194_1-002157

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**Fisheries req. per Hutchinson and Post (2014):
No humans, no fishery, no protection?**



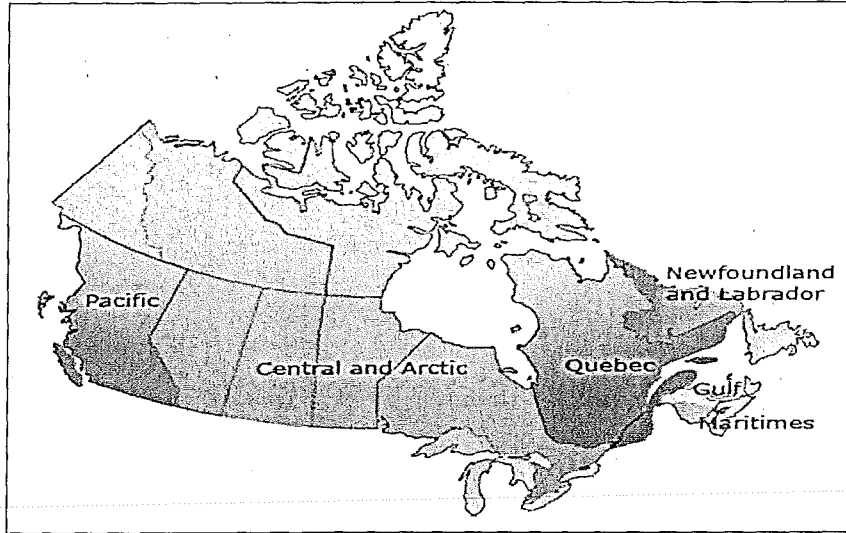
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Methodology

- Analyzed 183 *Fisheries Act* subsection 35(2) authorizations issued between May 1 and October 1 for the years 2012, 2013, 2014
 - Bill C-38 passed in June 2012 but Fisheries Protection Regime not brought into force until *November 25, 2013*
- Also analyzed 12 Annual Reports (2001/02 – 2013/14) on the Administration and Enforcement of Habitat/Fisheries Protection Provisions (as required by s. 42.1)
 - Referrals are reported in the year received;
 - Authorizations are reported in years issued;

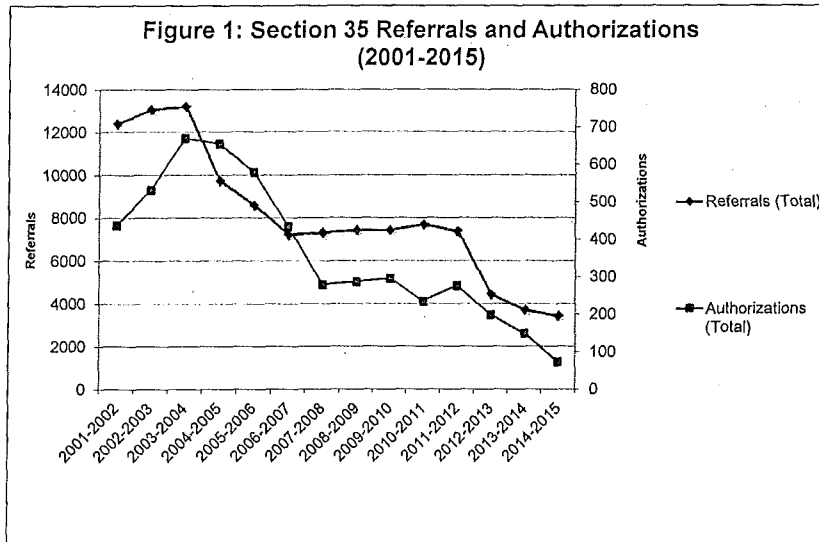
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Pacific and Central & Arctic Regions



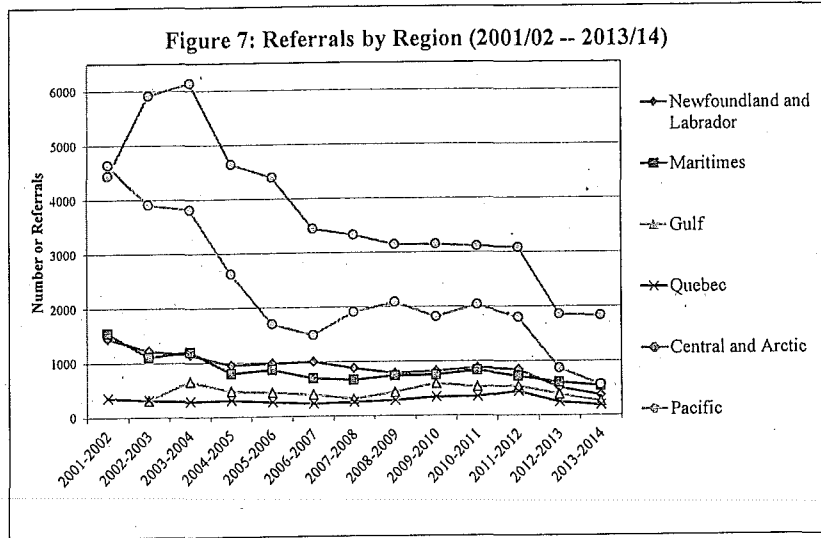
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National Trends



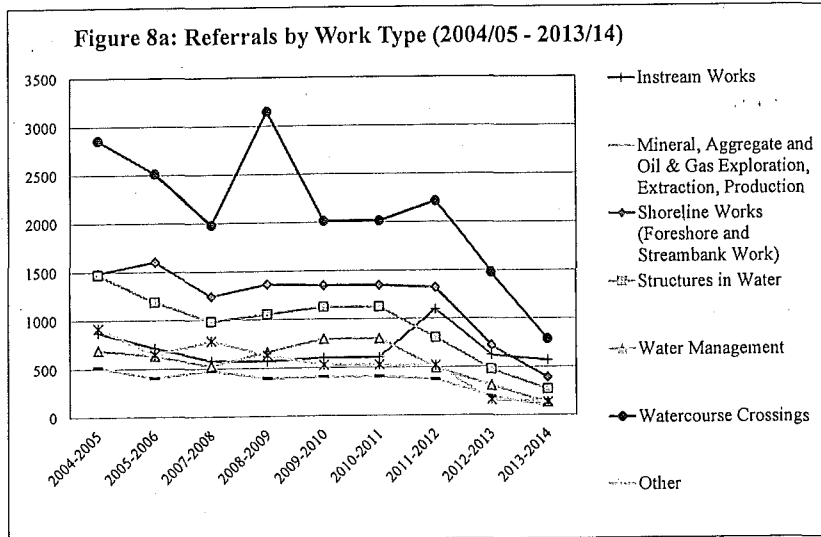
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Regional Trends



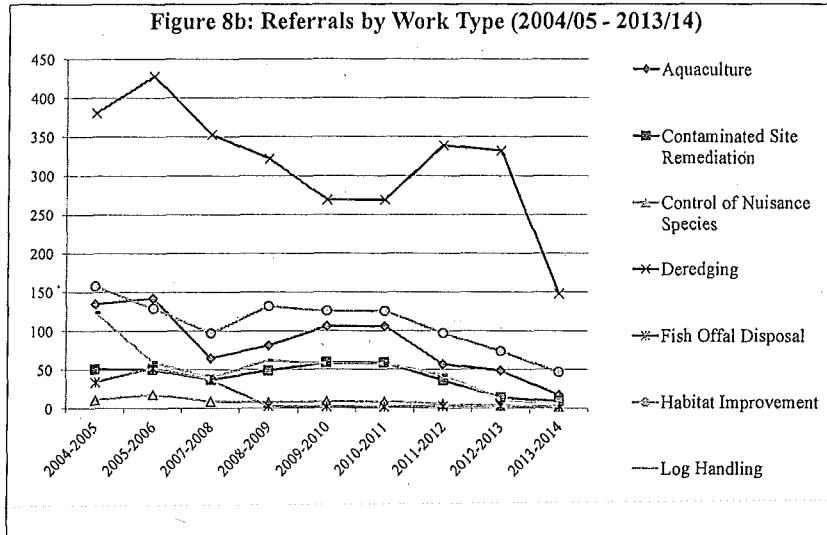
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Sectoral Trends



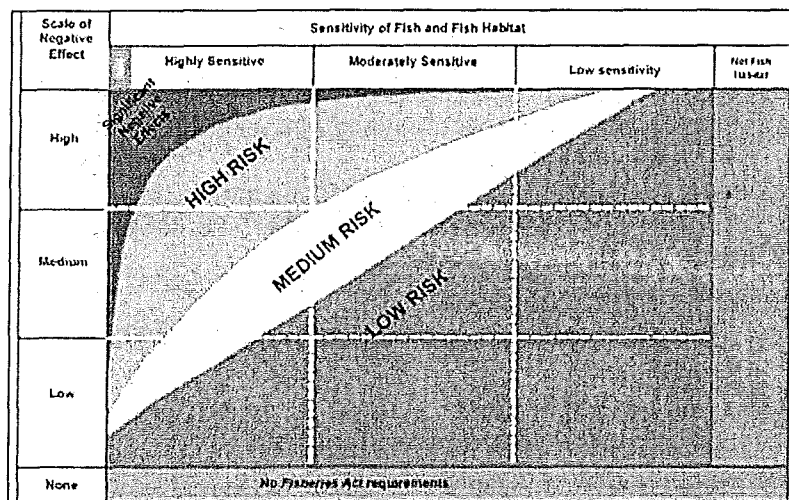
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Sectoral Trends cont'd



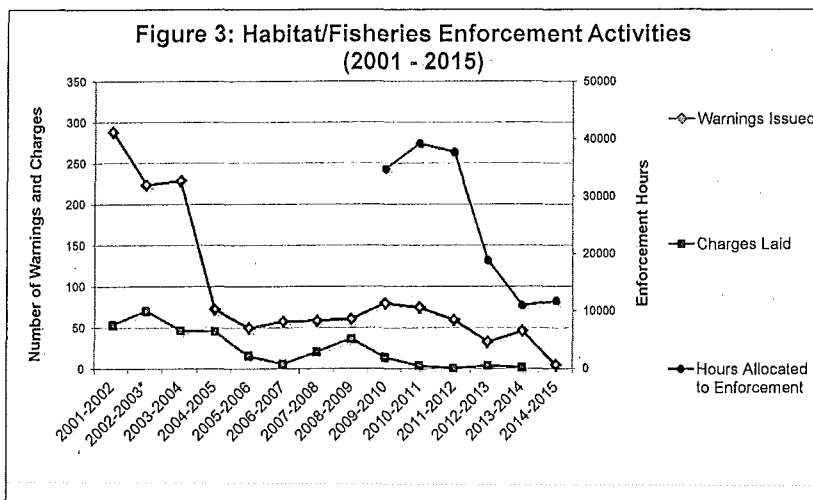
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Risk-based Regulation



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Enforcement



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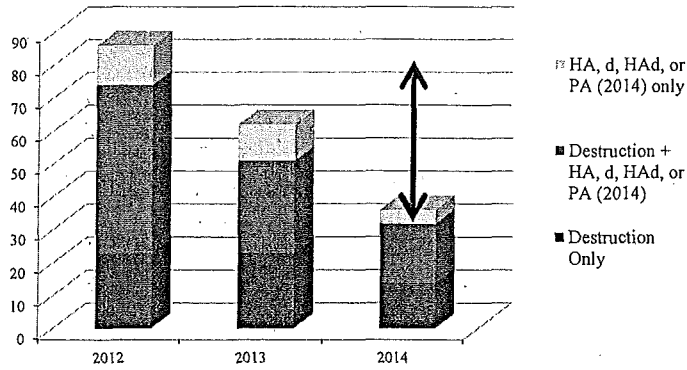
Habitat v. Fisheries Protection Regime

- Almost **60% reduction** (from 87 in 2012 to 36 in 2014) in authorizations from 2012 – 2014:
 - Large number of 2014 vintage (~15) related to 2013 Alberta Floods (further discussed below) – 2014 numbers could be even lower?
 - 87/6 months (2012, Pacific and C&A combined) = 174/year (pro-rated) = consistent with 164 authorizations in the 2011/12
- Possible explanations:
 - a) DFO has found a basis for ~ 60% reduction in regime's scope.
 - b) A reflection of reduction in referrals, which have declined by roughly 50% in these two regions.
 - c) Combination of (a) and (b)

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HADD v. DPAD

Figure 10a: Authorizations by Type of Impact (HADD v. DPAD) (2012 - 2014)

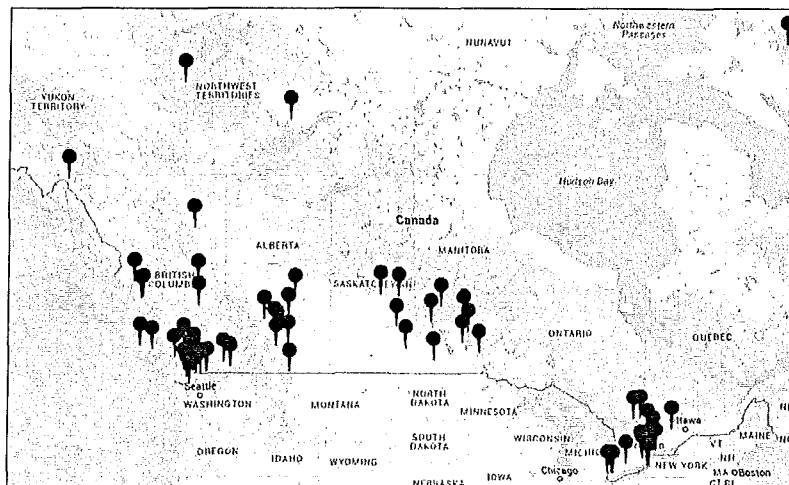


- Results show that harmful alteration & disruption were never major part of authorization scheme;
- Thus, change from HADD to DPAD cannot explain reduction in # of authorizations
- Fisheries requirement?

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Fisheries requirement?

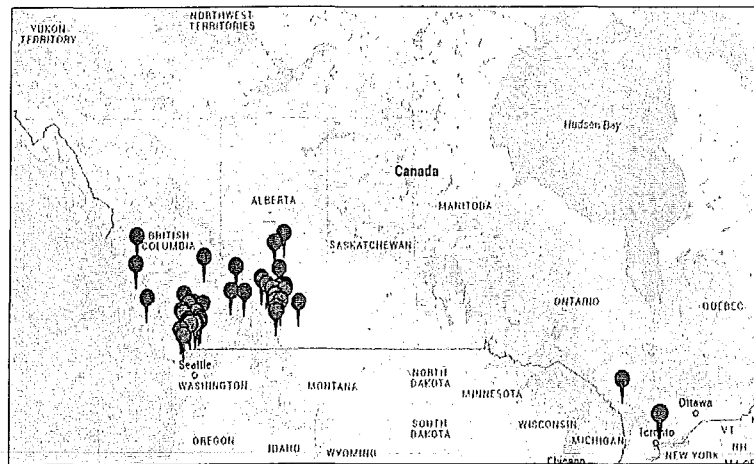
Figure 11a: Authorizations Issued Between May 1 – October 1, 2012



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Fisheries requirement cont'd

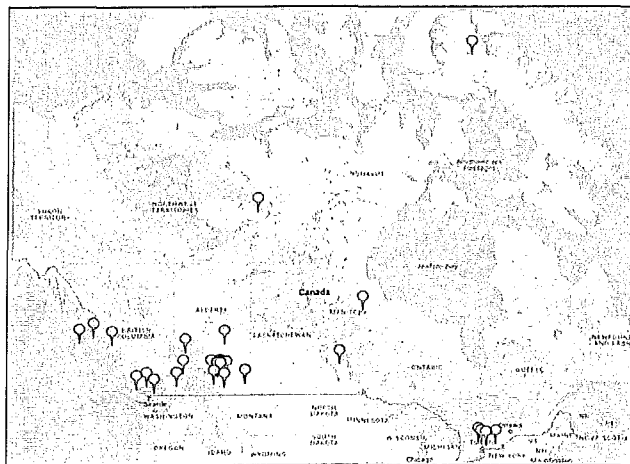
Figure 11b: Authorizations Issued Between May 1 – October 1, 2013



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Fisheries requirement cont'd

Figure 11c: Authorizations Issued Between May 1 – October 1, 2014

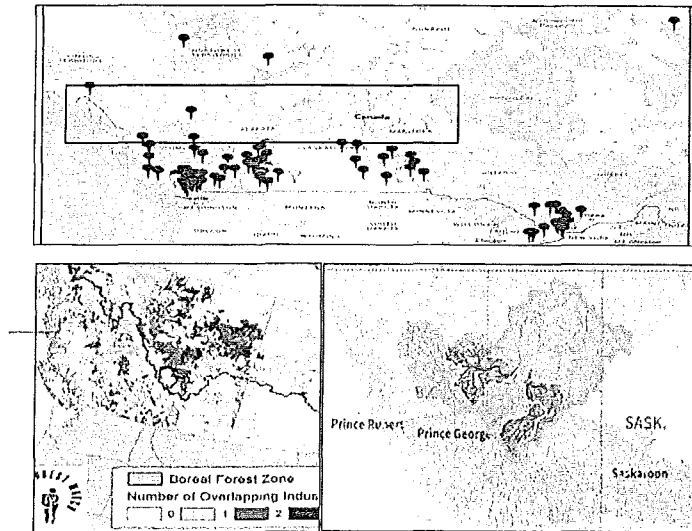


- Mapping suggests authorization regime has long been concentrated on urban areas;
- Fewer authorizations in 2014, but no obvious change in pattern
- What else might account for reduction?

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Actual Industrial/Resource Activity?

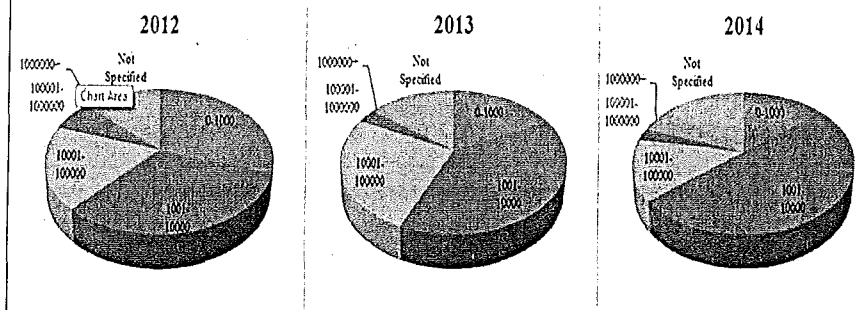
Figure 5: Authorizations by Location (2012 – 2014)



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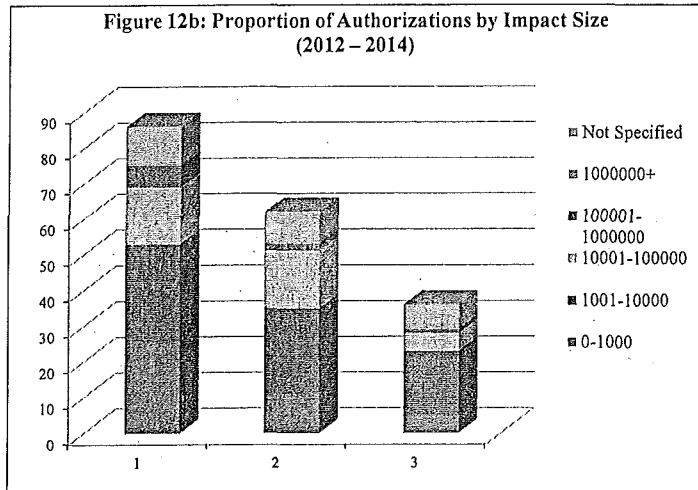
Size of Impact?

Figure 12a: Proportion of Authorizations by Impact Size (2012 – 2014)



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Size of Impact cont'd



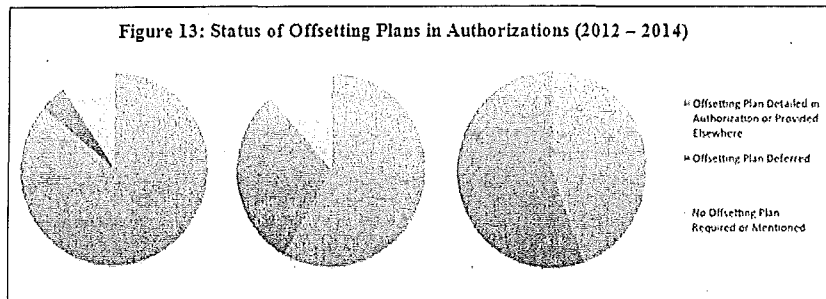
- Clear trend (increasing) in size of impacts authorized;
- Legislative basis?

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Section 6 Factors: Offsetting

6. Before...exercising any power under subsection...35(2)... the Minister shall consider the following factors:

- (a) the contribution of the relevant fish to the ongoing productivity of commercial, recreational or Aboriginal fisheries;
- (b) fisheries management objectives;
- (c) **whether there are measures and standards to avoid, mitigate or offset serious harm to fish** that are part of a commercial, recreational or Aboriginal fishery, or that support such a fishery; and
- (d) the public interest.



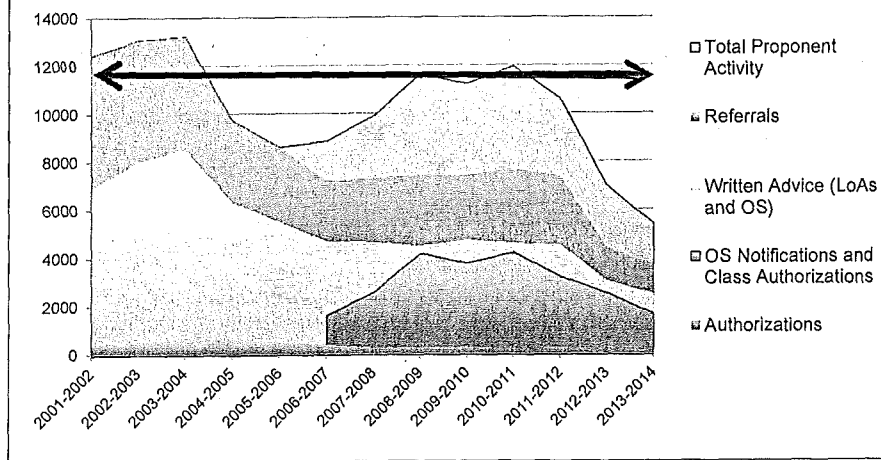
Dan Farber, "Taking Slippage Seriously" 1999

"There is many a slip 'twixt the cup and the lip."¹ Nowhere is this more true than in environmental law. In all areas of law, there are gaps between the "law on the books" and the "law in action," but in environmental law the gap is sometimes a chasm.²

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Implications for Fish Habitat?

Figure 5: Total Habitat Activity (2001/02 - 2013/14)



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Reforms?

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Timeline of recent reform initiatives

- Timeline:
 - 2015 Liberal Campaign promises
- Mandate letters to Minister of Fisheries and Oceans and Minister of Transport:
 - Review 2012 changes with a view to "restore lost protections and incorporate modern safeguards."
- Main Reviews and Reports:
 - Standing Committee on Fisheries and Oceans re: *Fisheries Act* changes
 - Standing Committee on Transport, Infrastructure and Communities re: *Navigable Waters Protection Act* changes
- Government of Canada's Discussion Paper (June 2017)

FOPO Review of *Fisheries Act*

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42nd Parliament, 1st Session (December 9, 2015 - Present)

REVIEW OF CHANGES MADE IN 2012 TO THE FISHERIES ACT: ENHANCING THE PROTECTION OF FISH AND FISH HABITAT AND THE MANAGEMENT OF CANADIAN FISHERIES

Report and Government Response

Report 6: Review of changes made in 2012 to the Fisheries Act: enhancing the protection of fish and fish habitat and the management of Canadian fisheries

- Adopted by the Committee: February 23, 2017
- Presented to the House: February 24, 2017

Report 6 Presented to the House: Friday, February 24, 2017 Government Response Presented to the House: Tuesday, June 20, 2017

Information

Briefs (108) ✓

Witnesses (50) ✓

Available online:
<https://www.ourcommons.ca/Committees/en/FOPO/StudyActivity?studyActivityId=9156509>

Fisheries Act Report Highlights

- The Committee recommended:
 - A return to the prohibition against harmful alteration, disruption or destruction (HADD) of fish habitat (excision of 2012 “serious harm to fish” regime);
 - Greater clarity around what constitutes a HADD, with a view towards certain sectors in particular (municipalities, agriculture);
 - Increased resources for project review and enforcement;
 - An online registry/database for authorizations and better reporting of the state of fish habitat;

Questions and Comments?

Thank you!

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FACULTY OF LAW

Professor Martin Olszynski, LL.M., LL.B., B.Sc.
Murray Fraser Hall, 2500 University Drive NW
Calgary, AB, Canada T2N 1N4
Telephone: (403)220-3816
Email: molszyns@ucalgary.ca

October 27, 2016

Standing Committee on Fisheries and Oceans
Sixth Floor, 131 Queen Street
House of Commons, Ottawa ON
K1A 0A6, Canada
E-mail: Fopo@parl.gc.ca

Re: Fisheries Act Review – “Serious Harm to Fish” and Associated Provisions

I am pleased to submit this brief for the purposes of the Committee's review of the "Fisheries Protection Provisions" of the *Fisheries Act* R.S.C. 1985 c. F-14. Presently, I am an assistant professor at the University of Calgary Faculty of Law, researching and writing in the areas of environmental and natural resources law and policy. Prior to joining the University in 2013, I spent almost six years as counsel with the federal Department of Justice, practicing law in the legal services unit at Fisheries and Oceans Canada. During this period, I also spent some time on secondment to the Legislative and Regulatory Affairs Division at Environment Canada. I have a B. Sc. (Biology) and an LL.B., both from the University of Saskatchewan, and an LL.M. (specialization in environmental law) from the University of California at Berkeley. My research have been published in various journals, including the *Dalhousie Law Journal*, *Queen's Law Journal*, the *Osgoode Hall Law Journal* and the *Canadian Bar Review*, as well as both of Canada's environmental law journals, the *Journal of Environmental Law and Practice* and McGill's *Journal of Sustainable Development Law and Policy*.¹

My brief is largely based on my own recent research² and is organized as follows:

- I. Background: Section 35 before and after Bills C-38 and C-45.....1
- II. Research into the Implementation of the Habitat/Fisheries Protection Provisions.....2
- III. Recommendations.....8

Based on my research, it is clear that the 2012 changes have undermined the protection of fish habitat in Canada. It is also clear, however, that the previous habitat regime was badly inadequate well before those changes came into force. Consequently, my recommendations go beyond reverting to the previous regime and include re-orienting the Act into an effective – but also efficient – information-gathering tool for managing impacts to fish habitat.

I. Background: Section 35 before and after Bills C-38 and C-45

As the Committee no doubt knows, section 35 of the *Act* used to prohibit any work or undertaking that resulted in the "harmful alteration or disruption, or the destruction" (commonly referred to as "HADD") of fish habitat. It was amended in 2012 to prohibit works, undertakings, and activities that result in "serious harm to fish that are part of a commercial, recreational or

¹ My full faculty profile is available here: http://law.ucalgary.ca/law_units/profiles/martin-olszynski

² Martin Olszynski, "From 'Badly Wrong' to Worse: An Empirical Analysis of Canada's New Approach to Fish Habitat Protection Laws" (2015) 28 J. Env. L. & Prac. 1, available online: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2652539

Aboriginal fishery,” serious harm being defined as “the death of fish or any permanent alteration to, or destruction of, fish habitat” (“DPAD”). Commercial, recreational, and Aboriginal fisheries are also defined, and a new section 6 has been added to guide the Minister’s decision-making with respect to all of the Fisheries Protection provisions.

Section 35 has always been more of a regulatory regime than a prohibition. Impacts to fish habitat prohibited by subsection 35(1) could – and still can – be authorized by the Minister or by regulations pursuant to subsection 35(2). Prior to Bills C-38/45, this regulatory regime generally worked as follows. DFO would receive inquiries or authorization requests from proponents (referred to as “referrals”), which it would then review to determine if a HADD was likely to occur. For what it deemed “low risk” projects (further discussed below), it would provide advice to proponents on how to reduce the likelihood of a HADD occurring with a view towards avoiding the need for an authorization. Such advice could be found in a letter specific to the proponent (referred to as a “Letter of Advice”) or in an “Operational Statement” (essentially a generic Letter of Advice available on DFO’s various regional websites for certain, usually routine, kinds of projects). In the case of the latter, DFO simply requested that proponents voluntarily notify DFO of their project. If avoidance of a HADD was not possible, an authorization was required, which until 2012 also triggered the need for an environmental assessment pursuant to the previous *Canadian Environmental Assessment Act* S.C. 1992 C-22.

Bill C-38 received royal assent in June 2012 but the changes to the *Fisheries Act* were not brought into force until November 25, 2013. Around that time, changes were also made to the manner in which DFO conducts its business. Operational Statements have been replaced with a “self-review” feature on DFO’s primary fisheries protection website.³ Here, project proponents are provided information and advice about the kinds of waters and works that DFO has determined do not require an authorization, with the important difference that there is no longer any way for proponents to notify DFO of their projects. DFO has also had its budget reduced by \$80 million in 2012 and another \$100 million in 2015.⁴ The Minister of Fisheries and Oceans also released the *Fisheries Protection Policy Statement* (October 2013), which set out her interpretation of the new “fisheries protection” regime and which replaced the Policy for the Management of Fish Habitat that had been in place since 1986. The stated goal of the 1986 policy was to ensure “No Net Loss” (NNL) of the productive capacity of fish habitats. DFO had a hard time achieving this objective, largely due to inadequate monitoring and enforcement.⁵

II. Research into the Implementation of the Habitat/Fisheries Protection Provisions

To gain some insight into how DFO is actually implementing the new fisheries protection regime, I analyzed over 150 subsection 35(2) authorizations issued by DFO’s two largest regions (the Pacific and Central/Arctic Regions) over a six month period (May 1 – October 1) for the years 2012, 2013, and 2014 (2014 being the first year under the new regime). In order to help frame the analysis and provide additional baseline information, I also analyzed data from twelve annual reports to Parliament by DFO (2001/02 – 2013/14). These reports are statutorily required by section 42.1 of the *Fisheries Act* and must include information on “the administration and enforcement of the provisions of the Act relating to fisheries [previously habitat] protection”.

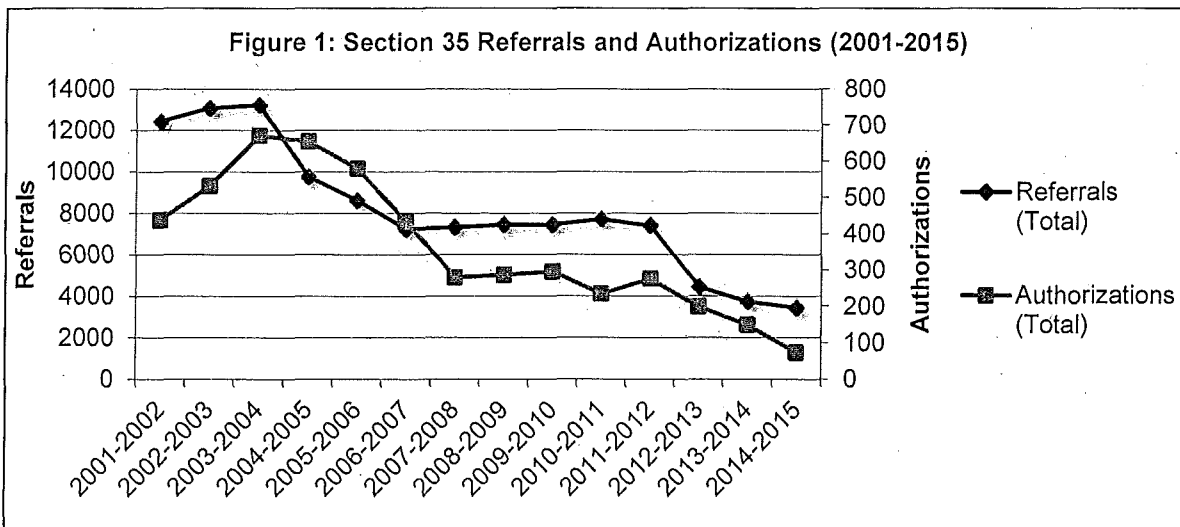
³ See <http://www.dfo-mpo.gc.ca/pnw-ppe/index-eng.html>

⁴ See <<http://www.cbc.ca/news/canada/new-brunswick/conservative-mps-argue-dfo-cuts-won-t-hurt-research-1.1162831>> and <<http://www.vancouversun.com/news/Federal+budget+cuts+million+from+fisheries+oceans+over+three+years/8133846/story.html>>

⁵ See http://www.oag-bvg.gc.ca/internet/English/parl_cesd_200905_01_e_32511.html#hd5h

Where indicated, the figures below have been updated to include data from DFO's 2014/15 Report.

Figure 1 (updated) demonstrates that the total number of authorizations issued by DFO nationally (right axis) has declined from a high point of almost 700 in the 2003/04 fiscal year to roughly 75 for 2014/15. The most dramatic drops occurred between 2006 – 2008 and then again in 2012 – 2015. Similarly, the number of referrals that DFO reviewed (left axis) has also declined. The most dramatic decline in referrals occurred between 2004 and 2006. The slight lag in the drop in the number of authorizations issued around that time makes sense when one considers that referrals would take on average two years to process.⁶ That is not the case, however, with respect to the declines in *both* authorizations and referrals *immediately* following the passage of Bill C-38 in 2012, bearing in mind that the changes *were brought into force in November 25, 2013*. These declines are consistent with a 2014 Vancouver Sun story wherein the chair of the Fraser Valley Watersheds Coalition suggested that "people got the memo that now is the time, no one is watching, the rules are vague, your chances of being prosecuted are virtually none."⁷



The decline in referrals between 2004/06 coincided with the launching of DFO's "Environmental Process Modernization Program" (EPMP), the goal of which was to "contribute to more efficient and effective delivery of its regulatory responsibilities and to support the federal smart regulation agenda." The most tangible result of this program was DFO's "risk management matrix" (below), which classified risks to fish habitat as high, medium, and low, with high-risk projects receiving site-specific review/authorization, medium risk projects being subject to streamlined authorizations, and low risk projects being subject to Letters of Advice/Operational Statements.

⁶ See <http://www.nrcresearchpress.com/doi/pdf/10.1139/cjfas-2012-0411>

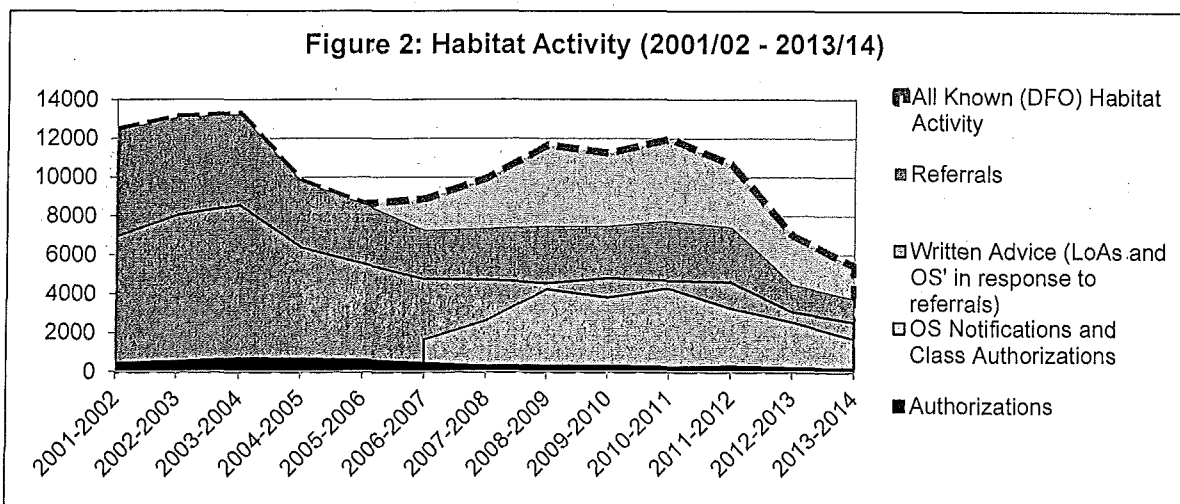
⁷ See

<http://www.vancouversun.com/technology/Minding+Farm+Agriculture+practices+clash+with+protection+streams+fish+habitat/9916232/story.html>

Scale of Negative Effect	Sensitivity of Fish and Fish Habitat			
	Highly Sensitive	Moderately Sensitive	Low sensitivity	Not Fish Habitat
High	HIGH RISK	MEDIUM RISK	LOW RISK	Not Fish Habitat
Medium				
Low				
None	No Fisheries Act requirements			

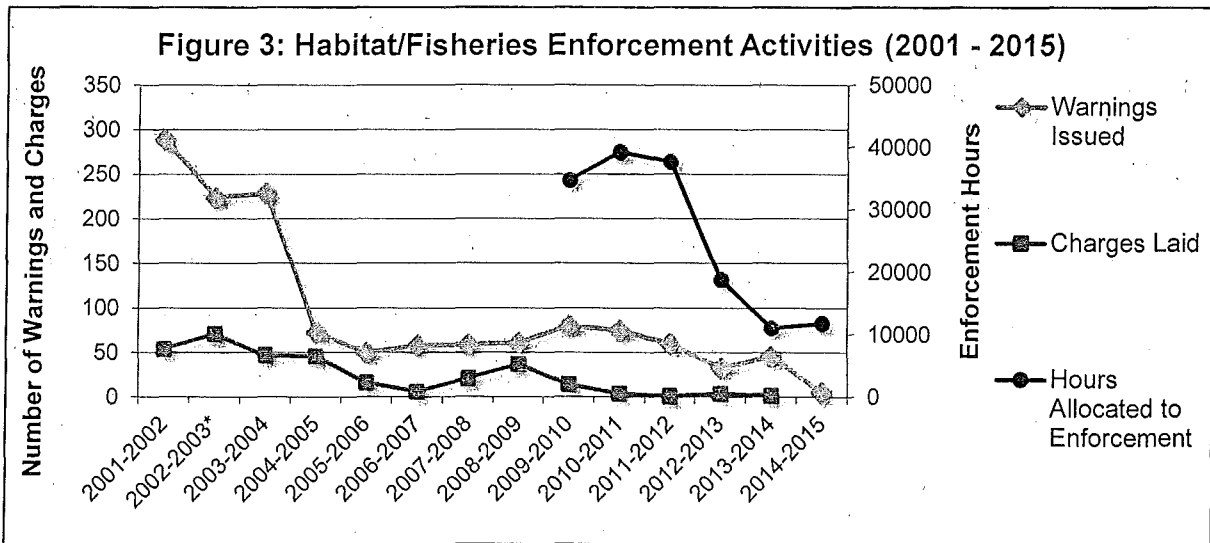
Risk-based regulation has both strengths and weaknesses. The Hampton Report (United Kingdom, 2005) suggested that "[p]roper analysis of risk directs regulators' efforts at areas where it is most needed, and should enable them to reduce the administrative burden of regulation, while maintaining...regulatory outcomes." However, risk-based approaches have a tendency to "neglect lower levels of risk, which, if numerous and broadly spread, may involve considerable cumulative dangers."⁸ As further discussed below, DFO was fairly successful at reducing administrative burden but did so at the expense of not managing cumulative effects.

Returning to DFO's risk management matrix, the Committee may have noted the upward and seemingly arbitrary placement of the low-risk threshold, which results in this category taking up 60% of the matrix space. This is consistent with a 60% reduction in authorizations following the implementation of the EPMP starting around 2004/05. The reduction in referrals is also consistent with increased reliance on Operational Statements. Figure 2 (below) suggests that, after an initial decline, all known habitat activity (referrals, Operational Statement notifications and class authorizations combined) returned to near pre-EPMP referral levels after a few years. This suggests that the level of habitat-related activity in Canada remained relatively constant throughout the analyzed period but that an increasing portion of it was carried out without DFO's direct involvement or supervision. Figure 2 also reaffirms that site-specific authorizations have only ever played a very minor role in regulating the totality of impacts to fish habitat in Canada.



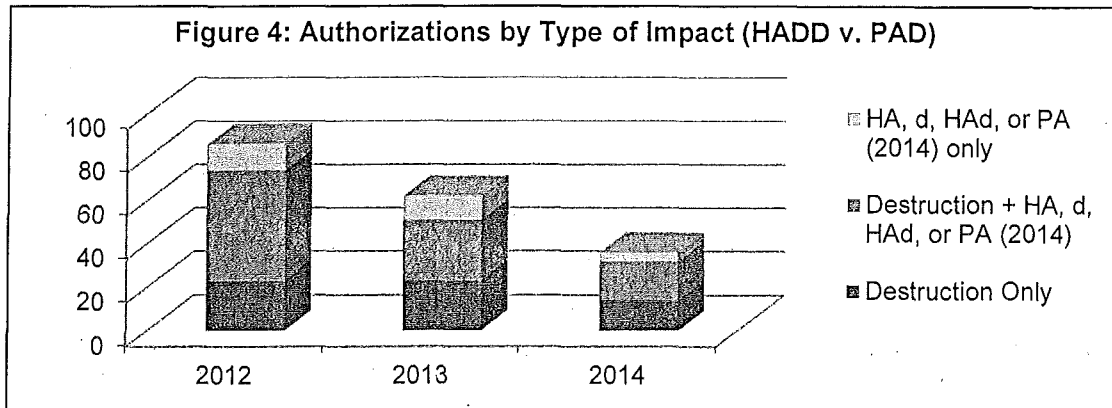
⁸ Robert Baldwin & Julia Black, "Really Responsive Regulation" (2008) 71:1 Mod L Rev 59.

Part and parcel with the “smart” regulatory agenda is a de-emphasizing of traditional enforcement activity. Accordingly, in its 2003/04 Report to Parliament, DFO indicated that near the end of that fiscal year “habitat compliance modernization” had been added to the EPMP, reflecting the program’s “increased emphasis on monitoring and auditing of its regulatory decisions and resourcing the full continuum of compliance activities.” Figure 3 (updated) confirms a dramatic decline in traditional enforcement activity following the introduction of the EPMP and further declines in the past five years (including only 5 warnings and 0 charges in 2014/15). Unfortunately, there was never any commensurate increase in monitoring and auditing. As noted by the CCESD in her 2009 Report to Parliament, DFO has not measured habitat loss or gain, “has limited information on the state of fish habitat across Canada” and has “little documentation to show that it monitored the actual habitat loss that occurred.”



Turning to the difference between the previous “habitat protection” regime and the current “fisheries protection” regime, DFO’s two largest regions went from issuing 86 authorizations in 2012 (over a six month period) to 36 in 2014 – a **58% reduction** (the 2014/15 numbers are even lower, suggesting a **66% reduction**). As will be seen, only a small percentage of this reduction (16%) appears attributable to the actual legislative changes to section 35.

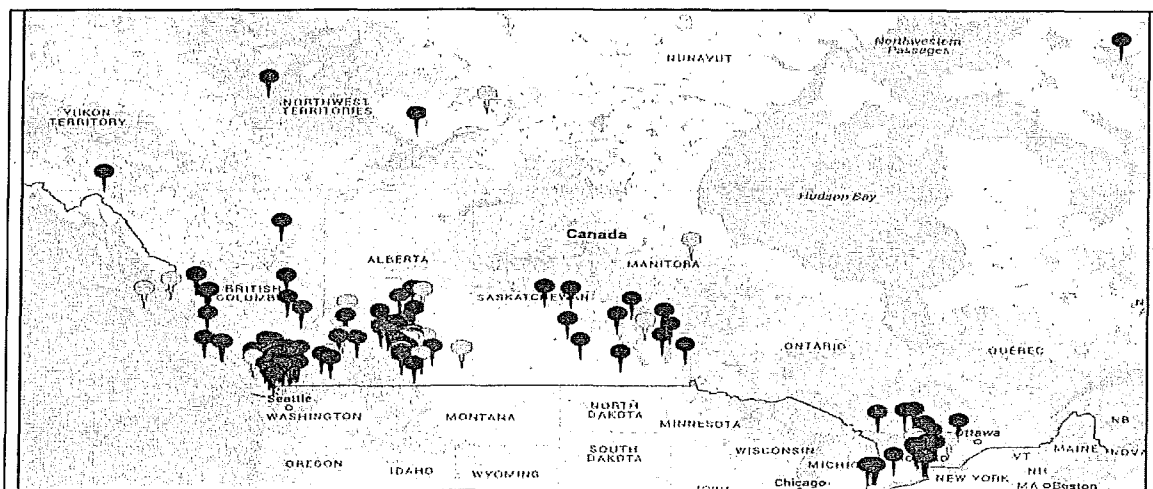
Assuming perfect implementation of both regimes, one would expect there to be fewer authorizations in the 2014 vintage simply on the basis that temporary disruptions were no longer prohibited. This scenario is complicated, however, by the fact that DFO risk-managed low-risk projects away from the authorization stream. Consequently, I coded all of the authorizations on the basis of the type of impact that was being authorized. The results (Figure 4) suggest that harmful alterations (HA) and disruptions (d) constituted only a small portion of DFO’s authorization activity under the previous HADD regime.



Practically speaking, this means that few projects that did not involve at least some destruction of fish habitat were being caught by the regulatory process under the previous HADD regime. This is not to say that disruptions and other harmful alterations were not technically prohibited (they were) but proponents were actively dissuaded from seeking an authorization and more or less assured compliance if they followed (or tried to follow) the mitigation measures set out in a non-binding Letter of Advice or applicable Operational Statement. Most importantly, Figure 2 makes clear that the change from HADD to DPAD cannot account for the 58% reduction in authorization activity under the new regime. At most, this change could account for a 16% reduction.

Turning next to the new “fisheries” requirement, I sought to determine whether this change could account for the balance of the reduction, bearing in mind the prediction made by Canadian fisheries biologists Jeffery Hutchings and John Post that Canada’s sparsely inhabited northern lakes and rivers would receive no protection.⁹ To answer these questions, the coordinates of all authorizations issued in 2012, 2013 and 2014 were plotted using Google Maps. Below is a screen shot of all years combined (blue = 2012, red = 2013, light blue = 2014):

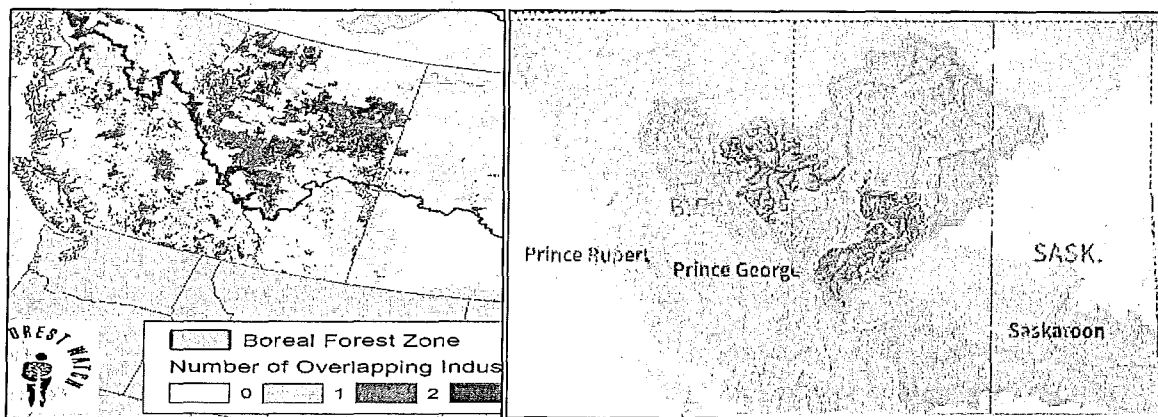
Figure 5: Authorizations by Location (2012 – 2014)



⁹ See http://myweb.dal.ca/jhutch/publications_pdfs/2013_hut_post_fish.pdf

As can be seen, apart from the fact that there are fewer authorizations in 2014 their distribution more or less resembles the distribution from 2012 (2013 exhibits the strongest urban concentration). Although the data is obviously limited, the absence of any obvious change in pattern is consistent with the government's talking points and DFO's policy that the fisheries requirement did not represent a radical change to the scope of the regime. The more striking realization, however, is that the vast majority of Canada's freshwater lakes and rivers appear to not have had the benefit of habitat protection *before* the implementation of the new fisheries protection regime. It is simply untenable to suggest that there were only *a few instances* of habitat destruction (to say nothing of harmful alteration or disruption) that would have required authorization in all of northern British Columbia, Alberta, Saskatchewan, Manitoba and Ontario in 2012 and 2013. In addition to a long-established forestry industry, this area includes the Montney and Horn River shale gas plays of northeastern B.C. and northwestern Alberta, which have seen significant development in the past decade.¹⁰ It also includes Alberta's Lower Athabasca Region, home to Alberta's oil sands. The left side of Figure 6 (below) shows the number of overlapping industrial concessions in that same region (Global Forest Watch, 2014), while the right shows WWF Canada's recent assessment of the health of the Peace-Athabasca watershed (for more on WWF's watershed reports, see my letter to the Committee dated 22 September 2016).

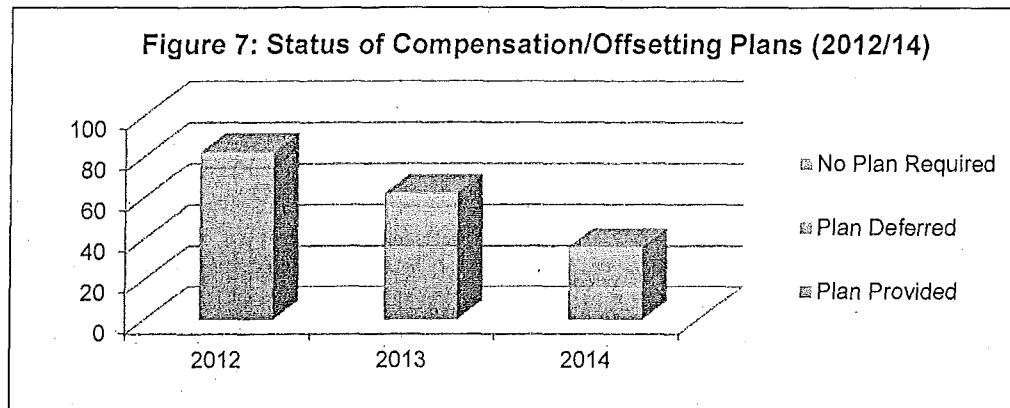
Figure 6: Industrial Concessions and the State of Watersheds in Western Canada



Like the change from HADD to DPAD, then, the addition of the fisheries requirement cannot account for the reduction in authorization activity. As I discuss in more detail in my paper, it appears that DFO adopted a new size threshold as a proxy for "serious harm to fish," which can account for 40% of the reduction.

With respect to the section 6 factors, I wanted to see whether these had any appreciable effect on the content of authorizations. Generally, I observed that authorizations from 2014 were shorter and less detailed than in 2012 or 2013. With respect to offsetting plans in particular, I was surprised to find that these were increasingly (and probably unlawfully) being deferred to a later time (Figure 7). This is likely a reflection of the 3-month time limit in the new section 35 regulations, coupled with resource constraints following the reductions to DFO's budgets.

¹⁰ See <http://www.theglobeandmail.com/news/british-columbia/sweeping-aboriginal-lawsuit-threatens-to-strangle-resource-development-in-northeastern-bc/article23282084/>



This outcome is made possible because sections 6 and 6.1 are half-measures only; in addition to listing a series of mandatory factors, establishing a clear structure for the regulatory review process also requires transparency. Notwithstanding the fact that the Supreme Court of Canada has long held that Canada's fisheries are a "public resource" (see *e.g. Interprovincial Co-Operatives Limited et al. v. The Queen* [1976] 1 SCR 477 at 495), DFO has never maintained a public registry of section 35 authorizations. Under the previous CEEA this reality was offset by the fact that the need for a section 35 authorization triggered a federal environmental assessment, information about which would be posted on the Canadian Environmental Assessment Registry (CEA Registry). Presently, however, the only way for Canadians to become aware of an authorization is through an access to information request.

III. Recommendations for Reform

A. Principles Informing Reform

In developing my recommendations, I was guided by the results of my research but also the following principles and ideas, which I elaborate below:

- 1) Some degree of **risk-based management** is inevitable, but poor regime design is not;
- 2) Mechanisms are required for managing **cumulative impacts** to fish and fish habitat;
- 3) **Public participation and transparency** are hallmarks of regulatory excellence;
- 4) DFO must embrace **learning for continuous improvement**;

1) Risk-based management: My research demonstrates that Operational Statements were effective in reducing the administrative burden on both DFO and proponents (*i.e.* proponents did make use of this mechanism). According to London School of Economics Professor Julia Black, however, "if such systems are not supplemented by other programs, such as those of random inspection...they can under-deter the lower level risk creators... The overall effect of regulation is then not to reduce risk, but to substitute widely spread risks for lower numbers of larger risks.¹¹ As my research shows, enforcement activity was virtually non-existent following the implementation of the Operational Statements regime, while what limited information exists (*e.g.* WWF Canada's Watershed Reports, above) does indeed suggest that the effect has been to under-deter low-risk level creators.

¹¹ See Robert Baldwin & Julia Black, "Really Responsive Regulation" (2008) 71:1 Mod L Rev 59.

2) Cumulative effects: There is a broad recognition in environmental law and policy circles that most environmental problems are not the result of only a handful of major industrial projects but also of the cumulative effect of thousands of individual and seemingly innocuous impacts. According to American scholars JB Ruhl and Eric Biber, rather than exempting such harms (as DFO does now with the self-assessment tool on its website), meeting this challenge requires a regulatory approach that captures small harms but imposes a minimal administrative burden on proponents:

General permits [e.g. class authorizations or “minor work” regulations] are likely also superior to...specific permits [i.e. individual s. 35 authorizations] and exemptions...in managing the environmental harms from the accumulation of thousands or millions of individual activities. Currently, many of these activities are exempt from government regulation. But...general permits – even if they impose minimal substantive and procedural burdens – can have significant advantages over an exemption. First, the general permit can allow the collection of information that can be used to design a more effective and politically sustainable regulatory program in the future... General permits also might make it more feasible for a regulatory agency to respond to emerging harms – for instance, an activity that previously was harmless because it was limited might become more widespread and begin causing significant damage... Finally, general permits might allow more public participation and accountability than a legislative exemption, given that there is at least a rulemaking process for the public to participate in and for courts to review.¹²

3) Public Participation and Transparency: As recently observed by a team of international experts gathered to give advice to the Alberta Energy Regulator, “effective public engagement and transparency are hallmarks of regulatory excellence.”¹³ Presently, except where a section 35 authorization is required for a project undergoing federal environmental assessment, there is no transparency and no formal role for public participation in the section 35 authorization regime.

4) Learning: The same experts referred to above also observed that “an excellent regulator pursues continuous improvement.” There is no shortage of reports, whether by the CESD, DFO employees or Justice Bruce Cohen, that confirm that DFO is not measuring its progress in terms of managing fish habitat in Canada, making learning and improvement all but impossible.

B. Specific Recommendations

With the above principles in mind, I propose a scheme that would impose a minimal burden on proponents of minor works, undertakings, and activities, while at the same time providing DFO the information it requires to effectively and transparently manage threats to fish and fish habitat in Canada. This regime would include the following elements:

- 1) A return to the previous **HADD provision** (although keeping the addition of “activities”);
 - a. This would also require ancillary changes to sections 20 (flow), 37 and 38.

¹² Eric Biber & JB Ruhl, “The Permit Power Revisited: The Theory and Practice of Regulatory Permits in the Administrative State” (2014) 64:2 Duke LJ 133 available on SSRN: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2397425

¹³ Cary Coglianese, Listening, Learning, Leading: A Framework for Regulatory Excellence [2015].

- 2) Prompt development of additional **class authorizations** or “minor works” and/or “minor waters” regulation(s) that would automatically authorize projects listed therein:
 - a. These class authorizations/regulations would be relatively easy to develop, as they would be based on DFO’s previous “Operational Statements”;
 - b. The only regulatory burden on proponents would be to notify DFO that the work or activity is being carried out, including when and where. This could be done online through DFO’s website much like the current self-assessment tool;
 - c. Contravention of these class authorizations/minor works regulations would generally be subject to an administrative monetary penalty (AMP) regime *in lieu* of regulatory prosecution (except in egregious circumstances);
 - d. Should DFO continue to apply a risk-based approach, closer coordination with compliance personnel is essential, as is a random inspection program;
- 3) Continued **individual assessment of medium to large projects**;
 - a. To the extent that DFO will continue to allow proponents to rely on “adaptive management”¹⁴ (also referred to as “learning while doing”) for dealing with uncertainties in the context of mitigation or offsetting, legislative provisions are required to set out what adaptive management actually is, its requisite steps, and a requirement for the development of adaptive management plans (as further discussed below);
- 4) **Re-write the section 6 factors** to include mandatory consideration of:
 - a. The state of the watershed or sub-watershed in which the work/undertaking/activity is being carried out, bearing in mind that the state of fish habitat has always been, and continues to be, the best proxy for fisheries productivity;¹⁵
 - b. Where they exist, watershed or regional plans established by the provinces and how the impacts to fish habitat fit within those plans (recognizing the importance of provincial jurisdiction and the goal of integrated resource management);
 - c. The potential impacts on Indigenous and/or treaty rights; and
 - d. The principles of precaution and sustainable development;
- 5) A requirement for DFO to **provide written reasons** explaining how it considered these factors in reaching its decision to authorize (or not) a given work, undertaking or activity;
- 6) An **online public registry similar to the CEA Registry** which would contain:

¹⁴ This recommendation is based on another recent empirical paper of mine with respect to the implementation of adaptive management in Alberta’s energy resources sector. Briefly, adaptive management is supposed to be a planned and systematic process whereby management actions (e.g. habitat offsetting) are designed as experiments and monitored with a view towards learning. Unfortunately, my research confirms that, as practiced in Canada, adaptive management is rarely planned or systematic, with no real potential for learning. Legislative provisions are therefore necessary to ensure that adaptive management can deliver on its promise of improved decision-making.

¹⁵ “The sustainability and ongoing productivity of fish populations depends on the amount and quality of the habitats...required for each life stage, interactions with other species, and the appropriate management of fisheries and anthropogenic threats”: Randall, R.G., Bradford, M.J., Clarke, K.D., and Rice, J.C. 2013. *A science-based interpretation of ongoing productivity of commercial, recreational or Aboriginal fisheries*. DFO Can. Sci. Advis. Sec. Res. Doc. 2012/112 iv + 26 p at 5: See also Nicolas W.R. Lapointe, Steven J. Cooke, Jack G. Imhof et al., “Principles for ensuring healthy and productive freshwater ecosystems that support sustainable fisheries” (2014) 22 *Environmental Reviews* 110 at 112 (“Habitat degradation and loss is the major threat to the survival of freshwater fish populations”).

- a. All notifications obtained pursuant to the minor works/minor waters regulations;
- b. All section 35 applications, their eventual authorizations, reasons, adaptive management plans, and any monitoring data subsequently provided per the terms of those authorizations;
- c. An online map that plots the location of all of these projects and that provides information on the state of the watershed (fish habitat) in which they are found;

Much more could and should be done to bring the *Fisheries Act* into the 21st century. In light of the condensed nature of this reform exercise, however, I have limited my recommendations to something that builds off existing institutions and practices and is achievable in the short term. In the long term, the information gathered through the reforms proposed here should be analyzed and used to draft the next generation of habitat protection laws.

Thank you for the opportunity to submit this brief. I would be pleased to present the results of my research and recommendations for reform to the Committee should you deem this useful.

Best regards,

Martin Z. Olszynski

SUMMER 2017

FLOW MONITOR

CANADIAN WATER POLICY WATCH

Water in a New Era of Functional Federalism

It is our great pleasure to share this new edition of the FLOW Monitor – our publication that summarizes key activities, explores new and emerging ideas, and provides analysis and discussion on all things water policy in Canada.

Much has changed in Canada since our last edition – in particular, the election of a new federal government. Commitments to build a renewed, nation-to-nation relationship with Indigenous governments and honour the UN Declaration on Rights of Indigenous Peoples (UNDRIP); to review and modernize the environmental laws and policies rolled back by the previous federal government; and to invest in infrastructure to advance sustainability and build resilience in the face of climate change all hold significant potential for positive progress for waters in Canada. Further, these promises point to an eagerness to make the federation work in a better way.

This edition of the FLOW Monitor focuses on this new policy context. It includes articles on the modernization of the *Fisheries Act* and reviews of the *Canadian Environmental Protection Act* (CEPA) and the Federal Sustainable Development Strategy, plus a summary of FLOW's report on leveraging the government's \$180 billion infrastructure plan to advance urban water sustainability. The feature article focuses on the concept of collaborative consent – an emerging and

promising approach to creating a more equitable and just governance relationship between Canada and Indigenous peoples that is grounded in the process of reconciliation.

Cooperative federalism that is more inclusive of Indigenous and local governments is a crosscutting theme in this edition of the FLOW Monitor. At its heart, cooperative federalism is about (re)building relationships to develop collaborative solutions that meet the needs of the country while addressing unique cultural and regional interests, challenges and contexts. Developments like the Pan-Canadian Framework on Clean Growth and Climate Change and the recent Assembly of First Nations – Canada Memorandum of Understanding on Joint Priorities are indications that this government is thinking differently about the nature and function of the Canadian federation.

Yet many of Canada's most pressing water issues – from algal blooms plaguing Lake Winnipeg and Lake Erie to drinking water crises in too many First Nation communities to large scale flooding due to climate change – continue to persist. The role of water in broader issues of national concern, including natural resource development, economic growth in agriculture and our relations with the United States, is also increasingly prominent. All of this points to the need for a sustained focus on cooperative federalism and a deeper dialogue on making the Canadian federation work for water in the 21st century. You can expect more on this theme in future editions of the FLOW Monitor. ■

TONY MAAS, DIRECTOR AND OLIVER BRANDES, CO-CHAIR

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COLLABORATIVE CONSENT

Advancing a nation-to-nation relationship with Indigenous peoples in Canada

MERRELL-ANN PHARE, ROSIE SIMMS, OLIVER M. BRANDES, MICHAEL MILTENBERGER

In the wake of Canada's 150th birthday it is time to consider what is needed to make our federation work better. In an era of conflict around pipelines, new hydropower dams and developments of all sorts in traditional territories of Indigenous governments across the country, we are also poised for a new path forward with the endorsement by the federal government of United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP). Implementation of UNDRIP is needed to create a more equitable and just governance relationship between Canada and Indigenous peoples. Trends in the Supreme Court from three important cases originating from British Columbia: Delgamuukw, Haida Nation, and Tsilhqot'in Nation only reinforce this, emphasizing that decision-making without the consent of Indigenous nations comes at a high cost and bears significant risks.

COLLABORATIVE CONSENT AS THE PATH FORWARD

Collaborative consent is a mutual consent process through which Indigenous and non-Indigenous governments commit to working together with a goal of achieving each other's consent to decisions, policies, and plans. It is about governance and changing how decisions are made. Collaborative consent is the missing link in confederation as it provides a way for Indigenous government to have seats at the table. This benefits all Canadians and all governments, at every level, and will be increasingly important as water issues become more complex as the climate changes.

Collaborative consent involves long-term processes requiring all governments to build structures and new institutions to engage and share decision-making. It does not require surrendering jurisdiction or authority; indeed, governments need to bring their authorities to the table and be prepared to implement them after consensus decisions are made.

This visionary approach has been applied in a number of instances in the Northwest Territories and was used by the NWT in the process of developing the Mackenzie River Basin Bilateral Water Management Agreements with Alberta and B.C. This experience from Canada's North demonstrates the proof of possibility – and it is now time for governments at all levels to embed this approach in all aspects of water management and governance.

GETTING PAST HISTORICAL BARRIERS TO A TRULY “COOPERATIVE” FEDERATION

As a concept, collaborative consent is distinct from section 35 requirements of the Canadian constitution related to consultation and accommodation of Indigenous peoples. The Supreme Court's interpretation of section 35 provides the framework that, through the avenue of consultation, legitimizes infringements of Indigenous rights. Collaborative consent offers a constructive way to build ongoing relationships among Crown and Indigenous governments, and can avoid rights infringements, litigation and social unrest.

Even with historical game stoppers, like unceded territory, and resolving land, title and rights claims that have been viewed as necessary precursors to any real governance conversation, issues can be addressed through collaborative consent because each party participates based on their own understanding of their authority, regardless of whether others agree. Collaborative consent offers a way to craft solutions that work for all parties through a truly cooperative form of federalism without needing to resolve the difficult question of who “owns” the land and water.

Collaborative consent already forms the foundation of how Canada is governed, we just haven't called it that, and it hasn't yet involved Indigenous nations. Because our constitution is often unclear regarding areas of jurisdiction, we have a long history of federal, provincial, and territorial governments working together formally and informally at consensus-based governance tables on matters of shared importance and concern. We do this because it results in better – and lasting – decisions.

Intergovernmental relationships matter when governing in a federation: proceeding with a decision unilaterally and without consensus around the table risks significant harm to relationships with other governments.

A forthcoming discussion paper explores the opportunity of collaborative consent in the context of the new *B.C. Water Sustainability Act*. The paper demonstrates the myriad ways – from water sustainability planning to embedding environmental flow considerations in water management to addressing land-water linkages – that better governance becomes possible with a foundation built on collaborative consent.*

HALLMARKS OF COLLABORATIVE CONSENT

The real world examples and the experience of the authors of this article reveal core hallmarks of collaborative consent, which include:

- Collaborative consent is fundamentally based on respect, trust, and the art of diplomacy between governments.
- Parties recognize each other as legitimate authorities (even if the scope of those authorities are being discussed in other venues).
- Parties engage at multiple sources and levels of governance.
- Parties commit to remaining at the table for the ‘long haul’.
- Real outcomes are generated.

FROM CONCEPT TO ACTION

Collaborative consent requires transformation of existing governance systems and ways of thinking in the water context. Improved skills around collaboration and consensus building are also urgently needed to make this approach work in practice. Understanding, support, time, and resourcing are needed for Indigenous Nations' institution (re)building and internal governance processes to engage in ongoing collaborative consent processes. Most importantly, all political leaders must embrace the opportunity of finally honouring Canada's obligation that all levels of governments of the three founding nations that were here in the beginning – and are here to stay – are represented at the table of confederation. ■

* Phare, M.A., Simms, R., Brandes, O.M. & Miltenberger, M. (2017 forthcoming). Collaborative Consent and BC's Water: Towards Watershed Co-Governance. POLIS Water Sustainability Project & Centre for Indigenous Environmental Resources. www.poliswaterproject.org.

Setting the course for Canada's next generation of urban water infrastructure

TONY MAAS, BRENDA LUCAS AND JIM BRUCE

The Government of Canada has committed to investing over [\\$180 billion in infrastructure](#) over the coming decade. This "infrastructure moment" presents an unparalleled opportunity to set the course for Canada's next generation of urban water infrastructure. And it comes at time when it is critically needed.

According to the [2016 Canadian Infrastructure Report Card](#), 29 percent of Canada's drinking water infrastructure and 35 percent of wastewater infrastructure is in fair to very poor condition. The backlog of repairs and upgrades to these critical community assets is estimated at \$88.5 billion. At the same time, climate change induced extreme events are happening across the country, with increasing frequency of floods, droughts, and freeze-thaw cycles adding to the pressure on community infrastructure.

In January 2017, [FLOW published a report and policy brief](#) that outlines three key strategies to advance urban water sustainably in Canada, demonstrates how these ideas are being put into action, and proposes policy recommendations for the federal government to advance their adoption. The report and brief build from a [roundtable](#) with the Minister of Infrastructure and Communities, hosted by the Southern Ontario Water Consortium (SOWC), the Water Technology Acceleration Project (WaterTAP) and the Ontario Clean Water Agency (OCWA) in June 2016.

THREE STRATEGIES TO ADVANCE URBAN WATER SUSTAINABILITY

Across Canada, communities are shifting the emphasis of water management from large-scale infrastructure expansion projects toward technologies and practices focused on increasing water efficiency, reducing carbon emissions, adapting to climate change and turning wastewater into a revenue stream.

THREE STRATEGIES LIE AT THE HEART OF THIS SHIFT IN APPROACH:

1. **Getting the most out of existing assets.** By combining performance-based asset management, comprehensive water efficiency programs, and optimization of wastewater facilities, communities can delay or even eliminate the need for costly infrastructure expansion while reducing energy

consumption and greenhouse gas emissions and saving money on operating costs.

2. **Building resilience and investing in living green infrastructure.** By slowing down runoff and absorbing or retaining pollutants, living green infrastructure buffers impacts of extreme precipitation events by mitigating damaging flood waters and reducing the amount of pollution reaching rivers and lakes. All infrastructure should be designed to meet future climatic conditions to 2050 or longer.
3. **Accelerating uptake of innovative technologies and practices.** World leaders in urban water sustainability are setting bold targets for nutrient recovery, water reuse, greenhouse gas reductions and net zero energy use. The federal government's historic infrastructure investments present an unprecedented opportunity to accelerate adoption of innovative water technologies and solutions, and to boost Canada's growing clean water sector.

SEIZING CANADA'S INFRASTRUCTURE MOMENT

With smart, strategic investments and well-designed regulations aligned around a vision of sustainability, resilience and innovation, the Government of Canada's infrastructure plan can address the backlog of repairs and upgrades to urban water systems, advance efforts to build smart and climate-ready communities, and position Canada as a leader in the \$500 billion global water technology and services market.

The following recommendations, drawn from FLOW's report, are aimed at aligning the fiscal policies that guide infrastructure investments and key federal regulations to advance urban water sustainability.

1. **Assess project proposals against criteria that prioritize and promote sustainability, resilience and innovation.** Project proposals should be screened to prioritize solutions that maximize the capacity of existing water and wastewater treatment facilities before investing in new, large-scale expansion

projects. As policy, the federal government should ensure that planned infrastructure can withstand extreme weather conditions by requiring that climate change resilience measures be incorporated into all infrastructure projects it supports.

- 2. Create dedicated funding streams to support municipalities in implementing urban water sustainability strategies.** Specific funding streams should be created to support sustainable solutions including water efficiency programs, optimization of wastewater facilities, living green infrastructure such as urban stream restoration and retention ponds, and technologies that generate energy and recover valuable resources such as nutrients from wastewater.
- 3. Modernize Wastewater Systems Effluent Regulations (WSER) and allow water and wastewater systems to sell carbon offset credits to drive sustainability and innovation.** Existing federal wastewater regulations should be updated to strengthen environmental performance, address new contaminants including pharmaceuticals and micro-plastics, and promote uptake of innovative Canadian technologies and practices. As outlined in a recent report by the Environmental Commissioner of Ontario, significant opportunities exist to reduce greenhouse gas emissions related to water and wastewater systems. The emerging federal carbon pricing regime should factor in the opportunity for these systems to provide carbon offset credits.

The future of water infrastructure clearly matters to Canadians. RBC's 2016 Water Attitudes Survey found that after health care, people feel water services should be the next top priority for government infrastructure funding. If implemented in a coordinated manner, the strategies and policy recommendations outlined by FLOW can ensure that federal infrastructure investments make the most of public dollars by advancing sustainability, building resilience, and driving innovation in urban water management. **F**

Books and reports by FLOW and member organizations

In each edition of the FLOW Monitor we profile some of the work of the Forum for Leadership on Water's membership. This edition features three reports dealing with regional and national water policy and governance, as well as three recent books authored by FLOW members.

TRANSCENDING BOUNDARIES

**FLOW and the Gordon Foundation
November 2016**

Transcending Boundaries: A Guidebook to the Alberta-Northwest Territories Mackenzie Basin River Bilateral Water Management Agreement is a detailed examination of one of the most comprehensive and progressive transboundary water agreements in the world. Through the Bilateral Agreement between Alberta and the Northwest Territories, signed on March 18, 2015, the two governments commit to cooperative, integrated watershed management in the Mackenzie River Basin – one of the most intact large-scale ecosystems in North America. Transcending Boundaries is a tool for citizens to take action and make their voices heard in advancing the implementation of this unique and historic agreement. Download the guidebook at: flowcanada.org/our-work.

REPORT TO THE NATIONAL ENERGY BOARD MODERNIZATION PANEL

**Centre for Indigenous Environmental Resources (CIER)
April 2017**

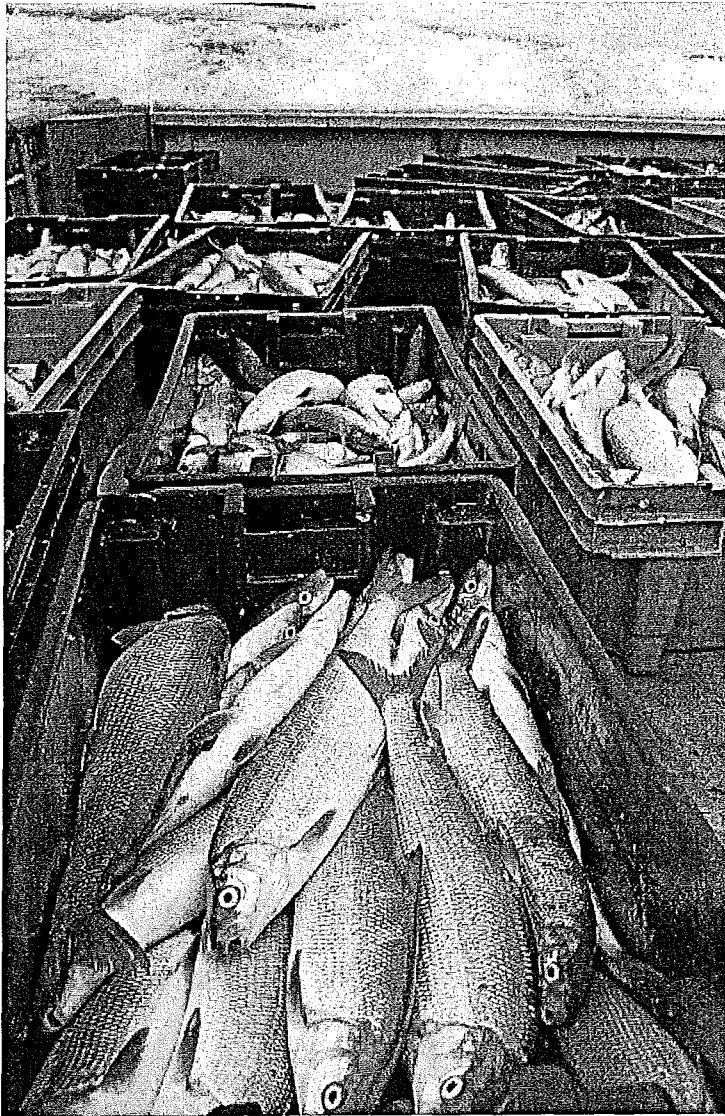
Authors Merrell-Ann Phare and Michael Miltenberger hold that many of the challenges being faced in relation to proposed projects subject to National Energy Board (NEB) processes and consultation result from a failure to build appropriate governance mechanisms that include Indigenous governments in discharging political commitments, policy and program development, and other obligations. This report, as a secondary focus, comments on some key inadequacies in the NEB Crown consultation process. It also provides, as answers to questions articulated in the relevant NEB Modernization Process Discussion Papers, recommendations about how to improve Indigenous-specific elements of the NEB itself. Read the discussion paper at: yourcier.org.

A BLUEPRINT FOR WATERSHED GOVERNANCE IN BRITISH COLUMBIA

**POLIS Water Sustainability Project
January 2014**

This report from the team at the POLIS Project on Ecological Governance focuses on water governance in British Columbia and offers a path forward for how the Province could transform its current approaches to decision-making to ensure a more sustainable and resilient future as it implements its recent *Water Sustainability Act* (2016). The report sets out a strategic 10-year program and proposes nine winning conditions to ensure success. Recognizing the unique institutional, legal, cultural, and geographic challenges of the province, this Blueprint outlines a timeline and clear milestones for moving towards watershed governance in B.C. Access the Blueprint at: poliswaterproject.org.

Book profiles can be found on page 12.



HABITAT 2.0:

Toward a modern Fisheries Act

LINDA NOWLAN AND TONY MAAS

“No habitat, no fish” has been a common refrain among fisheries managers and advocates for decades. The idea that sustaining healthy fisheries requires protection of fish habitat was first introduced into the *Fisheries Act* in 1977. In 2012, the government of the day’s omnibus budget legislation, Bills [C-38](#) and [C-45](#), unraveled many of the key connections in Canada’s environmental safety net, leaving only frayed threads in place for protecting fish and fish habitat.

Among the most significant changes introduced in 2012 was the replacement of the well-established “HADD” provision, which prohibited the “harmful alteration or disruption, or the destruction, of fish habitat,” with the widely contested and vague concept of serious harm to fish. This fundamental change to the legislation proved difficult for fisheries managers who had long relied on a body of scientific evidence and legal precedent for interpreting the HADD prohibition. This and other changes to the Act also posed challenges for project proponents whose applications for approval were impacted as DFO staff worked to establish policy to make decisions based on new concepts such as serious harm.

Fortunately for fish - and for the people that depend on them for livelihoods, recreation, subsistence and culture - the current Prime Minister tasked the Fisheries Minister with reviewing the previous government’s changes to the *Fisheries Act* in order to “restore lost protections, and incorporate modern safeguards.” In the fall of 2016, the government initiated action by requesting that the House of Commons Standing Committee on Fisheries and Oceans (FOPO) hold formal hearings to review



changes made to the *Fisheries Act* in 2012, and by creating an [online consultation portal](#) where stakeholders and the public were able to share ideas and input.

Fish, fish habitat, and fresh water clearly matter to Canadians. Hundreds of people took the time to offer comments on the government's online consultation portal, and the Standing Committee was inundated with input, hearing from 50 witnesses and receiving 188 briefs from a wide range of organizations and interests over the course of its review. FLOW and the West Coast Environmental Law Association (WCEL) partnered on a submission titled [Habitat 2.0 - A new approach to Canada's Fisheries Act](#), which Linda Nowlan, Staff Counsel at WCEL and FLOW member, [presented in person](#) before the Standing Committee. The brief included a suite of recommendations to restore and modernize the *Fisheries Act* to better protect and restore fish habitat.

The Committee's [report](#), tabled in Parliament in late February 2017, referenced many of the proposals put forward by FLOW and WCEL among its 32 recommendations. The Committee's top recommendation was to remove reference to the concept of "serious harm" from the legislation and to reinstate the HADD prohibition as the foundation of the Act's habitat protection provisions. But as per the Minister's mandate, the government's review of the *Fisheries Act* is intended to go beyond restoring what was lost in 2012. To that end, we were encouraged to see reference to modern concepts for fisheries management in the Committee's report, including adoption of an ecosystem approach and sustainability principles, assessing and addressing the cumulative effects of multiple activities, protection of [environmental flows](#), and provisions for fish passage around barriers such as dams and weirs.

As required under the rules of Parliament, the [government responded](#) to the Committee's report within 120 days of it being tabled in the House. The response supports many of the recommendations put forward by the Committee, and lays out four broad themes under which DFO will seek to improve habitat protection activities: 1) Planning and Integrated Management; 2) Regulatory and Enforcement

Activities; 3) Partnering and Collaboration; and, 4) Monitoring and Reporting Back to Canadians. These themes, which are reinforced in the government's recent [discussion paper on environmental reviews](#), are expected to form the basis for a second phase of consultation on *Fisheries Act* reform over the summer of 2017. In anticipation of these next steps, FLOW has been part of a growing and diverse group of organizations working together to advance a [common set of priorities](#) for a new *Fisheries Act*.


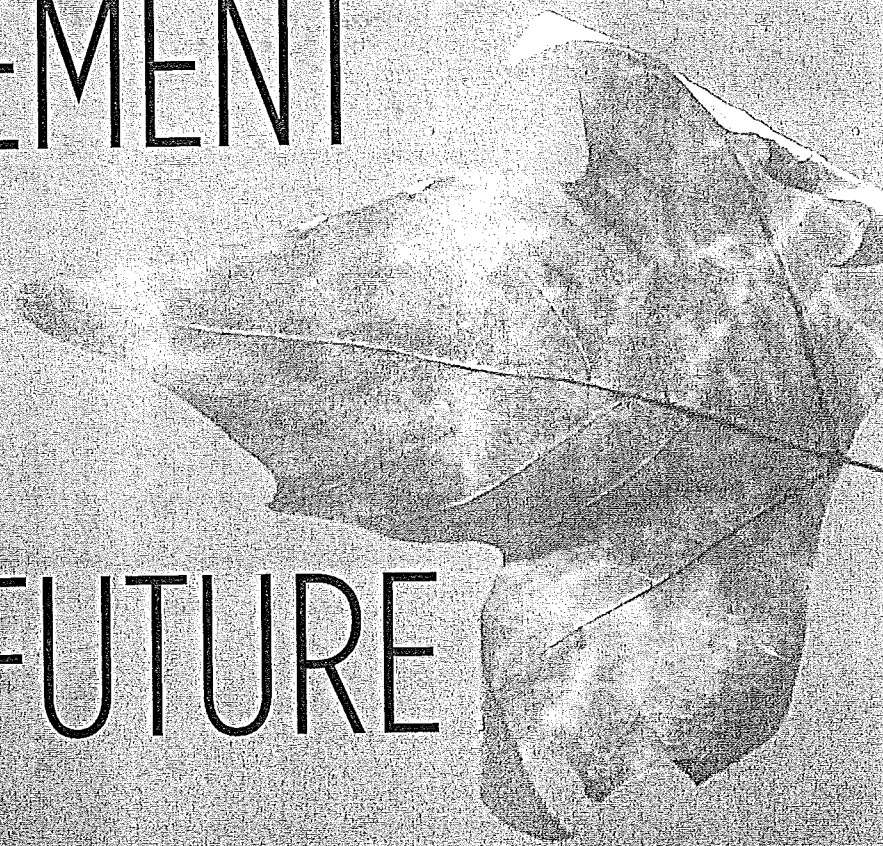
The government's commitment to renewing the *Fisheries Act* is an unprecedented opportunity to put in place a modern legal and policy framework to protect, restore and sustain healthy fisheries, waters and economies for generations to come. FLOW will be tracking the process of legislative reform closely over the coming months to identify opportunities to ensure a modern *Fisheries Act* - and the resources and capacity to implement it - are in place as critical elements of a strong environmental safety net for Canada. 

PHOTO Andrew Muir



Canadian Environmental Protection Act:

CHEMICALS MANAGEMENT FOR A CLEAN WATER FUTURE



RALPH PENTLAND AND TONY MAAS

The Canadian Environmental Protection Act, 1999 (CEPA, 1999) governs the assessment and management of risks to human and environmental health posed by chemical substances. The legislation includes a requirement for parliamentary review of the administration of the Act every five years. In March of 2016, Parliament passed a motion designating the Standing Committee on Environment and Sustainable Development to undertake the required review – a process that has generated enormous interest with 68 submissions received and 56 witnesses heard by the Committee over the fall and winter of 2016. FLOW took the opportunity presented by the review to share our perspective on the chemicals management provisions of the Act with a formal submission to the Committee.

PHOTO: Przemyslaw Sakralski on Unsplash

The 1988 *Canadian Environmental Protection Act* created a legal foundation for regulating potentially hazardous "discrete chemical compounds, classes of chemicals, emissions and effluents, and products of biotechnology, including microorganisms." There are some 80,000 to 100,000 distinct chemical substances in commercial use in North America today. At least some of these chemicals are not breaking down as quickly as they are added to the environment, leading to the inevitable conclusion that animals and humans are likely ingesting ever-stronger solutions of unpredictably active chemicals.

A significant number of those chemicals are so-called endocrine disruptors (EDCs). It is quite plausible to assume that those EDCs may produce significant disruptions in normal bodily functions or development, even in low doses of exposure. It is known that EDC's are widely dispersed in the environment, often at levels plausibly associated with biological effects, and that fish, wildlife and human exposure is widespread.

It is difficult – and in many cases impossible – to definitively prove a direct cause and effect relationship between a specific chemical and a specific health impact. And what becomes of thousands of synthetic chemicals as they mingle and at times combine in the aquatic environment is largely unknown. Nevertheless, the weight of empirical and early scientific evidence points to some very disturbing trends in human and environmental health, and the risks associated with environmental contaminants are quickly becoming a matter of urgent national concern that will require fundamental legal reforms, and changes to policies and programs for chemicals management in Canada.

To effectively deal with the risks posed by harmful chemicals, the fundamentals of CEPA will need to evolve from the current "one chemical at a time", "innocent until proven guilty", and "onus on government" approach to one that reverses onus by requiring that industry demonstrate the safety of the substances they produce and take action to develop alternatives that are safer for humans and the environment. Key deficiencies in chemicals management programming in Canada will also need to be addressed. These include the glacial pace at which "chemicals of concern" are assessed, which leaves Canadians exposed to potentially dangerous contaminants much longer than necessary, a lack of

sufficient toxicity data for most chemicals on the market; failure to assess the cumulative effects on people and other species of the many chemicals discharged to, and persisting in, the environment; poorly written regulations; and, lax enforcement.

Canada should look to experience in other parts of the world, especially to Europe, for direction on such fundamental change. Established in 2007, Europe's REACH (Registration, Evaluation, Authorization and Restriction of Chemicals) system requires any company in the EU that manufactures or imports more than 1 metric tonne of a chemical to register it with ECHA (The European Chemicals Agency) along with details about its properties, uses and safe-handling practices. If the compound is even suspected of posing a risk to human or environmental health, ECHA may demand additional testing, and if it is subsequently determined to pose a serious and irreversible risk, it cannot be used without official authorization. Before such authorization may be granted, the industry must analyse the availability of alternatives and the feasibility of substitution.

In June 2017, the Standing Committee released its report on the review of CEPA. While the Committee did not go so far as to recommend moving all the way to a REACH-like (European) approach for dealing with toxics, they did make a number of recommendations that move in that general direction. These include adding endocrine disruptors to the definition of toxics; adopting a reverse-onus approach for a sub-set of chemicals that are of very high concern; considering cumulative and synergistic effects of multiple chemicals; and, requiring mandatory assessment or reassessment of a substance if another OECD country has placed new restrictions on it. FLOW supports these recommendations and we look forward to continued engagement on efforts to reduce the risks to Canadians, our waters and our environment posed by chemical substances. ■



Canada's Federal Sustainable Development Strategy:

FOCUSING ON FRESHWATER PROTECTION

TONY MAAS AND RALPH PENTLAND

The *Federal Sustainable Development Act, 2008* requires that the Minister of Environment and Climate Change consult on and table a "whole-of-government" Federal Sustainable Development Strategy (FSDS) every three years. *Achieving a Sustainable Future*, which covers the period from 2016-2019, is Canada's most recent iteration of the FSDS. In June of 2016, FLOW took the opportunity to offer comments on the draft strategy as part of the government's consultation process.

Tabled in Parliament in October 2016, the final FSDS is a comprehensive document that reflects the mandate letters issued by the Prime Minister to his Cabinet and thus the government's policy agenda. Efforts to align the federal strategy with the Sustainable Development Goals of the United Nations' 2030 Agenda sends a signal that Canada has ambitions to once again play a role in advancing sustainable development globally. FLOW was pleased to be recognized as a "Partner in Action" in the 2016-2019 strategy.

FLOW's comments on the draft FSDS focused around 12 opportunities that we believed would greatly strengthen the final strategy.

1. LEGAL AND INSTITUTIONAL OPPORTUNITIES

Opportunity #1: Strengthening the *Federal Sustainable Development Act*. Many industrialized countries have legislation similar to Canada's, but that include more action-oriented and inspirational goals, a broader



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Thanks to our partners and supporters

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set of sustainability principles, and creative institutional initiatives such as appointing an advocate for future generations or a Parliamentary Committee for the future.

Opportunity #2: Repairing federal environmental legislation. Review of the FSDS at a time when the federal government is also reviewing key environmental laws, including the *Fisheries, Navigation Protection, National Energy Board and Canadian Environmental Assessment Acts*, presents a unique opportunity to align the FSDS and these important pieces of legislation around common sustainability principles.

Opportunity #3: Implementing nation-to-nation relationships with Indigenous peoples. The federal government is committed to establishing a new nation-to-nation relationship with Indigenous governments and peoples. One such opportunity – the concept of collaborative consent – is explored in more detail in a separate article in this newsletter.

Opportunity #4: Strengthening federal water institutions. While most water management takes place from the bottom up, these efforts would be greatly enhanced by capacity and coordination at the federal level through the creation of a Canada Water Agency, a Ministry of State for Water or some equivalent institution.

2. WATER MANAGEMENT OPPORTUNITIES

Opportunity #5: Advancing freshwater strategies. Nearly every province and territory has introduced water strategies of some sort over the past decade. The federal government should play an active role in advancing these strategies considering that many water outcomes depend, to a large extent, on decisions made by the federal government.

Opportunity #6: Upgrading boundary waters management. The federal government's role in protecting Canadian interests in shared Canada – U.S. waters has waned significantly in recent years. Areas requiring more attention, including binational fact-finding modeled on the successful procedures developed by the International Joint Commission, include algal blooms in Lake Winnipeg and renegotiation of the Columbia River Treaty.

Opportunity #7: Making the federation work for water. Issues such as climate change and more dangerous environmental pollutants suggest a growing need for federal, provincial and territorial governments, and

indeed Indigenous and local governments, to work even more closely together toward shared policy goals and coordinated action.


Opportunity #8: Sustainable infrastructure and clean technology. The federal government's decade-long infrastructure investment plan presents an opportunity for Canada to join leading countries that are setting expectations for low impact development, water efficiency and reuse, net zero energy use, and resource recovery. These matters are discussed in more detail in the article titled *Setting the course for Canada's next generation of urban water infrastructure* in this newsletter.

3. POLICY RESEARCH OPPORTUNITIES

Opportunity #9: Chemicals management research. Current Canadian chemicals management policies are unlikely to be adequate to deal with emerging issues. This matter is addressed in greater detail in an article on the federal government's review of the *Canadian Environmental Protection Act* in this newsletter.

Opportunity #10: Flood damage reduction research. Flood damages are rapidly escalating with climate change. While increased federal investments in this area are important, federal flood policies, which are basically free governmental flood insurance, are not keeping up with the scale of the challenge.

Opportunity #11: Research on well-designed regulation. With the exception of carbon taxes, Canada relies almost exclusively on technology-based environmental regulation. Research in the U.S. and elsewhere has demonstrated that a mix of technology-based, performance-based and incentive-based regulation holds enormous potential for environmental and economic progress.

Opportunity # 12: Research related to environmental rights. Many countries have enshrined a "right to the environment" in their constitutions. The federal government should undertake research on this and related topics such as public trust law given that Canadian citizens are beginning to expect a more binding contract with their governments to preserve the life-sustaining attributes of water, air and oceans. 



AQUA HACKING - UNITED FOR LAKE ERIE

FLOW is pleased to be a partner in **AquaHacking 2017** - United for Lake Erie. Spearheaded by the de Gaspé Beaubien Foundation, AquaHacking is a multi-generational, multi-sectoral movement that mobilizes teams of water experts, hackers, engineers and other creative minds to develop functional, marketable innovations to solve real world water issues. Following two successful events focused on the Ottawa River in 2015 and the St. Lawrence River in 2016, the de Gaspé Beaubien Foundation chose to bring AquaHacking to Lake Erie. AquaHacking 2017 culminates in a Summit where five finalist teams will pitch their solutions to a panel of expert judges with the hope of landing the top prize of \$25,000 and access to support to help bring their solutions to market. This year's AquaHacking Summit, which will bring together water experts and advocates, political leaders, the private sector and exciting keynote speakers, will take place on September 13 in Waterloo Region in conjunction with Elsevier's Water Research Conference on The Role of Water Technology Innovation in the Blue Economy. **For more information visit: aquahacking.com**

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Books by FLOW Members

A CANADIAN ENVIRONMENTAL CHRONICLE (1954-2015)

James P. Bruce

Canadian Water Resources Association (CWRA)

This book chronicles the author's 60-plus years advancing environmental science and policy in the service of the people of Canada. In a career that spans early days as a weather forecaster to various Assistant Deputy Minister postings with the Government of Canada to Acting Deputy Secretary of the World Meteorological Association, Jim Bruce has played a leading role in tackling some of Canada's, North America's, and the world's most pressing environmental challenges including acid rain, ozone depletion, water management, and climate change. The book is available for purchase through the CWRA Bookstore.

"This is a book that, by showing how it was done, can recharge Canada's environmental scientists and managers to refresh their pursuit of a sustainable planet. Jim Bruce inspires the next generation of environmental scientists to also rise to the challenges of their time." - John Pomeroy, Ph.D.

DOWN THE DRAIN: HOW WE ARE FAILING TO PROTECT OUR WATER RESOURCES

Ralph Pentland and Chris Wood

Greystone Books

In this authoritative review of decades of independent critiques, accompanied by many real-world stories of water management failures, award-winning journalist

Chris Wood and Canadian water policy expert Ralph Pentland explore how governments have failed to protect the waters that we drink, fish from and swim in, and that support every aspect of our national economy. The authors review the history of water management in Canada and compare recent approaches in Canada, the United States, and Europe, proposing measures to improve our performance, including a new charter that would hold governments to account for decisions that impact water in Canada.

NORTH AMERICA IN THE ANTHROPOCENE

Robert William Sandford

Rocky Mountain Books

North America in the Anthropocene maintains that human beings have entered a new historical epoch - the Anthropocene - in which our own economic activity has reached such planetary scale and power that we can no longer count on Earth's natural systems and functions to absorb negative human impacts on landscape and biodiversity. Sandford attempts to address the question of why, when we clearly know the enormous risks we face, we are still not doing what is necessary to prevent climate disaster. The central tenet of this book is that what we as a society are facing is nothing less than a struggle to redefine our entire dominant mythology. If we want to survive and prosper in the Anthropocene, we will have to invent - and continuously reinvent - a new human mythos. Given the enormous challenges we face, creating that new mythos should be our society's most urgent common enterprise.

**17th Annual Great Lakes Water Conference
The Trump and Trudeau Administrations on Water**

Panel 2: Trudeau Administration

Presentation Title: Canada-Ontario Draft Action Plan for Lake Erie

Presenter: Madhu Kapur Malhotra, Manager, Strategic Analysis Section
Land and Water Policy Branch
Ontario Ministry of the Environment and Climate Change

Abstract:

Over the past decade, harmful and nuisance algal blooms and zones of low oxygen have been increasing in Lake Erie, and threatening the health of the lake. Water quality and fish and wildlife populations and habitats are degraded, beaches are fouled, water intake pipes are clogged, and the lake's important commercial and sport fisheries and tourism industry are increasingly at risk. As a result of potential biological toxins produced by harmful algae human health is also a significant concern.

At the root of the problem is excess phosphorus, a naturally occurring element that is required by all plant and animal life. However, in Lake Erie, too much phosphorus is causing excessive algal growth and threatening ecosystem and human health. The financial, social, and ecological costs of these blooms are significant and growing, and action is urgently needed to reverse the trend. To address this issue, jurisdictions on both sides of Lake Erie are developing domestic action plans based on a set of binational science-based targets that have been developed through the Canada-U.S. Great Lakes Water Quality Agreement.

In Canada, the development of the domestic action plan for Lake Erie, the Canada-Ontario Draft Action Plan, is being led by five federal and provincial government agencies through the Canada-Ontario Agreement on Great Lakes Water Quality and Ecosystem Health, 2014 (COA). COA is the primary mechanism through which Canada works with the Province of Ontario to deliver its commitments under the GLWQA. This unique federal and provincial collaboration has been a successful model for the protection and restoration of the Great Lakes for decades.

The presentation will provide highlights on the Canada-Ontario Draft Action Plan, including actions that have been identified to achieve the binational phosphorus loading reduction targets that apply to the Canadian side of Lake Erie. In addition to the work through COA and GLWQA, the Province of Ontario has also established its own targets and timelines to address algal blooms in Lake Erie through its own legislation – the

Great Lakes Protection Act, and is collaborating directly with jurisdictions in the U.S. to ensure there is steady progress on both sides of the lake, through the Western Basin of Lake Erie Collaborative Agreement with Ontario, Ohio, and Michigan; and the Great Lakes Commission's Joint Action Plan for Lake Erie which included the participation of Ontario and Lake Erie states.